



Era Aviation, Inc.

# Era Aviation Services

## PROCUREMENT SPECIFICATION

PROCUREMENT SPECIFICATION NO. 4025

HOSE ASSEMBLY - MEDIUM PRESSURE  
FUEL AND OIL, SMOOTH TUBE TFE (TEFLON)

Prepared By: Douglas Marwill Date: 06/09/00  
Douglas Marwill

Approved By:  
Quality Control: Dave Murphy Date: 6/12/00  
Dave Murphy

Engineering: Douglas Marwill Date: 06/09/00  
Douglas Marwill

DATE  
1/22/02

# ENGINEERING ORDER

E.O. No.  
A-2

SHT.  
1 OF 1

BY  
D. NELSON

APPROVED BY

*Doug Marshall*  
8110-3# 265-02-06

REASON FOR CHANGE: CORRECTED "AE" NUMBER.

MINOR CHANGE - FAR 21.95

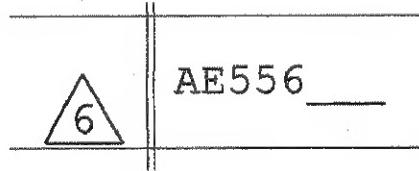
PAGE 6

"A" = AE556 hose with blue...

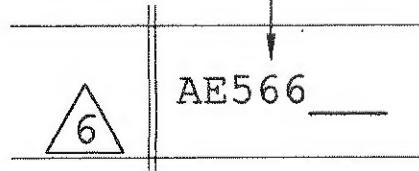
SHOULD BE

"A" = AE566 hose with blue...

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SHOULD BE



DATE 8/20/01	<b>ENGINEERING ORDER</b>		E.O. No. A-1	SHT. 1 OF 1
BY D. NELSON	TITLE <u>2.4 END FITTING STYLE CODE</u>		PROCUREMENT SPECIFICATION NO. 4025	
APPROVED BY <i>J. Maruill</i>			PAGE AFFECTED PAGE 4	

REASON FOR CHANGE: ADD FITTING CODE "Z" TO TABLE II.

MINOR CHANGE	<input checked="" type="checkbox"/>
MAJOR CHANGE	

ADD

Fitting Code	Fitting Spec No. or Part No.	Fitting Style  3	Fitting Material
Z	AE6505-6-8	III (37° Flared)	CRS Steel

Table II

DATE 8/20/01	<b>ENGINEERING ORDER</b>		E.O. No. A-1	SHT. <u>1</u> OF <u>1</u>
BY D. NELSON	TITLE 2.4 <u>END FITTING STYLE CODE</u>		PROCUREMENT SPECIFICATION NO. 4025	
APPROVED BY			PAGE AFFECTED PAGE 4	

MINOR CHANGE	<input checked="" type="checkbox"/>
MAJOR CHANGE	<input type="checkbox"/>

ADD

Fitting Code	Fitting Spec No. or Part No.	Fitting Style 	Fitting Material
Z	AE6505-6-8	III (37° Flared)	CRES Steel

Table II

PAGE B

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**LOG OF REVISIONS**

REVISION	DATE	PAGES AFFECTED	REVISION DESCRIPTION	APPROVED DATE
IR	06/09/00	ALL	Initial Release	<i>J. Marinelli</i> 06/09/00

ERA PROCUREMENT SPECIFICATION

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## 1 INTRODUCTION

### 1.1 Purpose

This process specification provides information for creating an Era Aviation part number for a flexible hose assembly which can be called out on the next assembly "using" drawing.

### 1.2 Hose Assembly Application

The hose assembly defined by this specification is a smooth-tube flexible tetrafluoroethylene (TFE) Teflon type hose reinforced with stainless steel wire braid and reusable end fittings. The hose assemblies are suitable for use in aircraft medium pressure fuel and engine oil systems. See Section 3, note 2 for applicable limitations.

## 2 HOSE ASSEMBLY PART NUMBERS

A hose assembly part number can be created or deciphered by examination of the "part no. code" and "example of hose assembly part no." sections shown in Sections 2.1 and 2.2, respectively. Use "Table I" and "Table II" in Sections 2.3 and 2.4, respectively, to code the hose size and end fitting style in the part number. The end fitting style refers to whether the fitting is straight, 45° angle, 90° angle 37° flared nut, or flanged and the fitting material (stainless steel or aluminum).

The notes in Section 3 provide specific information used in the specification of the hose assemblies.

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2.1 Part No. Code:

PS4025-H 000 D F 28 4 A

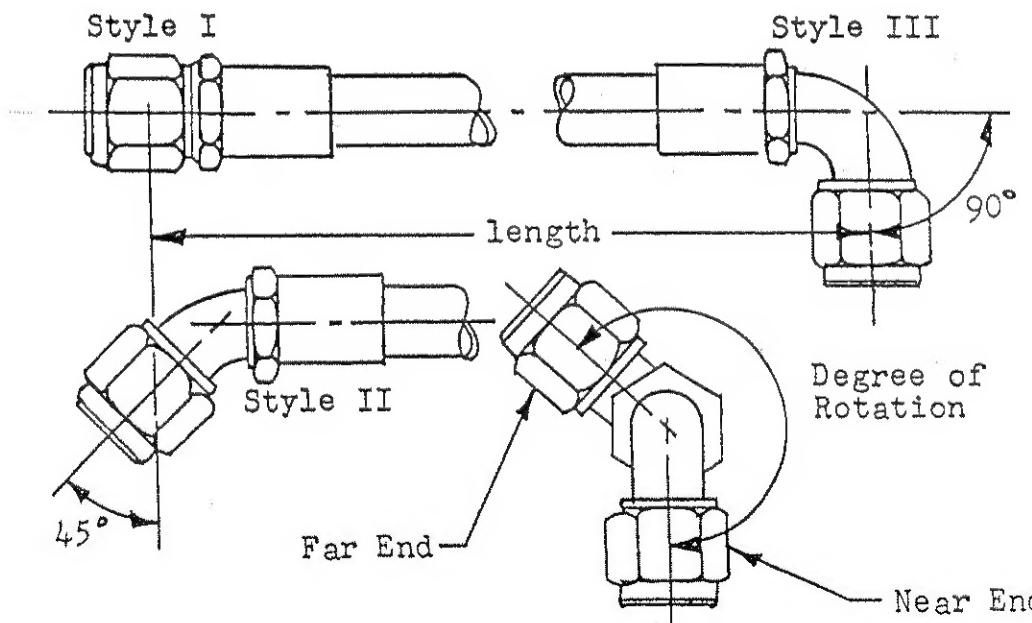
Basic Number

Hose Size Code  
(Table I)9 Degree Rotation  
(If none, use 000)Left End Fitting  
Code (Table II)

Add "A" for hose with abrasion cover.  
 Add "F" for firesleeve.  
 Leave blank if sleeving is not required.

4 Fractional Length coded in 1/8 inch increments

Length in inches

Right end fitting code  
(Table II)

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2.2 Example Of Hose Assembly Part No:

PS4025-H000AC284A - Hose Assembly, .50 Inch Diameter Nominal Hose Size, 0° Rotation, Straight Steel Flared Fitting on the Left End of the Hose, 90° Steel Flared Fitting on the Right End of the Hose, 28 1/2 Inches Long with Hose Abrasion Cover

2.3 Hose Size Code

Use Table I to specify the code letter for the desired nominal hose size (inside diameter). Dash numbers shown are equivalent tubing outside diameter in 1/16" increments. The normal maximum operating pressure is also shown.

Hose Size	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24
Code Letter	D	E	F	G	H	J	K	M	N	P
Max Operating Pres. (psig)	1500	1500	1500	1500	1500	1500	1000	1250	1000	1000

TABLE I

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Use Table II to specify the fitting style and fitting material of each metal end fitting.

Fitting Code	Fitting Spec No. or Part No.	Fitting Style 	Fitting Material
A	MS27053	I (37° Flared)	Aluminum
B	MS27059 or MS27055	II (37° Flared)	Aluminum
C	MS27060 or MS27057	III (37° Flared)	Aluminum
D	MS27053 C	I (37° Flared)	CRES Steel
E	MS27059 C or MS27055 C	II (37° Flared)	CRES Steel
F	MS27060 C or MS27057 C	III (37° Flared)	CRES Steel
G	MS27381	I (flareless & straight thd)	Aluminum
H	MS27384 or MS27382	II (flareless & straight thd)	Aluminum
J	MS27385 or MS27383	III (flareless & straight thd)	Aluminum
K	MS27381 C	I (flareless & straight thd)	CRES Steel
L	MS27384 C or MS27382 C	II (flareless & straight thd)	CRES Steel
M	MS27385 C or MS27383 C	III (flareless & straight thd)	CRES Steel
N	AE12912	I (flareless female metric thd)	CRES Steel
P	AE18156	I (flareless male metric thd)	CRES Steel
Q	AE19317	I (flareless male metric thd)	CRES Steel
R	AE20497	I (flareless female metric thd)	CRES Steel
S	AE22063	I (flareless female metric thd)	CRES Steel
T	MS27054	Straight Flange	Aluminum
U	MS27056	45° Flange	Aluminum
V	MS27058	90° Flange	Aluminum
W	MS27054 C	Straight Flange	CRES Steel
X	MS27056 C	45° Flange	CRES Steel
Y	MS27058 C	90° Flange	CRES Steel

SEE  
E.Q.

Table II

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## 3 NOTES

1. Hose assemblies defined by this specification are intended to conform to MIL-H-25579 (medium pressure smooth-tube TFE-Teflon). Abrasion shield, if required, shall be as defined in Note 10.
2. These hose assemblies are intended for use with MIL-T-5624 fuel and MIL-L-23699 lubricating oil with a fluid or ambient temperature operating range of -65°F to +450°F. See Section 2.3, Table I for normal maximum operating pressures. See vendor data for minimum bend radius and other limitations.



37° flared end fittings shall mate with an MS33656 fitting design. Threads shall conform to MIL-S-8879. Part no. AE12912 fitting is a -4 size end fitting on a -3 size hose. Part no. AE22063 fitting is a -4 size end fitting on a -4 size hose.



4 Fractional length hoses shall be specified in the following increments only:

- a. Under 30 inches long = 1/8 inch increments only
- b. 30 inches long and over = 1/4 inch increments only

5. Hose assemblies shall be fabricated in accordance with Era Process Specification PS4021, Type IV.



6 This hose assembly shall have an integral braided polyester cover over the wire braided hose. The purpose of this cover is to provide abrasion resistance protection to the hose assembly.

7. Identify each hose assembly per PS4021, Section 6.

8. Do not mix different hose vendor component parts in the same hose assembly.



9 Angular orientation between the elbows is expressed in three digits. The angle is measured in degrees counterclockwise from centerline of the nearest fitting when positioned at 6 o'clock to the centerline of the other fitting as shown in the figure. If the desired orientation is zero degrees, specify "000".

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A letter at the end of the part number designates the type of protective outer cover on the hose as follows:

" " = No code is an AE666 or AE667 hose with stainless steel wire braid on the outside without any cover

"A" = AE556 hose with blue braided polyester chafeguard

"F" = AE666 or AE667 hose with a captive AE102 silicone rubber firesleeve which is fire resistant per AS1055, Class A and can meet TSO C53a, Type C "Fire Resistant" requirements.



This is the vendor's part number of a specific hose used in the hose assembly. A letter shall be placed at the end of the part number to designate the size. Refer to Table I in Section 2.3 to determine the correct code letter for each size.

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#### 4 APPROVED PROCUREMENT SOURCES

Hose assemblies and component parts may be purchased only from the following Era Aviation engineering approved sources or their agents. Do not substitute any other vendor parts nor mix two different vendor parts in the same hose assembly.

COMPARTMENT PART	APPROVED VENDORS & CORRESPONDING HOSE PART NUMBERS		
	Aeroquip Corp. Jackson, MI 		
Hose W/O Sleeve, or	AE240 or AE666 or AE667		
Hose with Integral Abrasion Cover  6	AE556		
End Fittings	See Table II for Fitting Part No.		
Silicone Firesleeve  10	AE102		